Proposed Item for Biobased Designation

The following biobased product information has been collected to support item designation by USDA for the BioPreferred program. This summary reflects data available as of August 1, 2008.

Title: Lotions and Moisturizers

Description: Creams and oils used to soften and treat damaged skin.

Companies Supplying Item: 196 companies supplying Lotions and Moisturizers have been identified through internet searches, manufacturer's directories, trade associations, and company submissions.

Industry Associations Investigated: The following industry associations have been investigated for member companies supplying Lotions and Moisturizers:

- United Soybean Board Association
- National Corn Growers Association
- International Spa Association
- Organic Consumers Association
- Canadian Cosmetic Toiletry and Fragrance Association

Commercially Available Products Identified: Of the companies identified, 632 Lotions and Moisturizers are commercially available on the market.

Product Information Collected: Specific product information including company contact, intended use, biobased content, and performance characteristics have been collected on 133 Lotions and Moisturizers.

Industry Performance Standards: Product information submitted by biobased manufacturers and suppliers indicate that have typically been tested to the following industry standards:

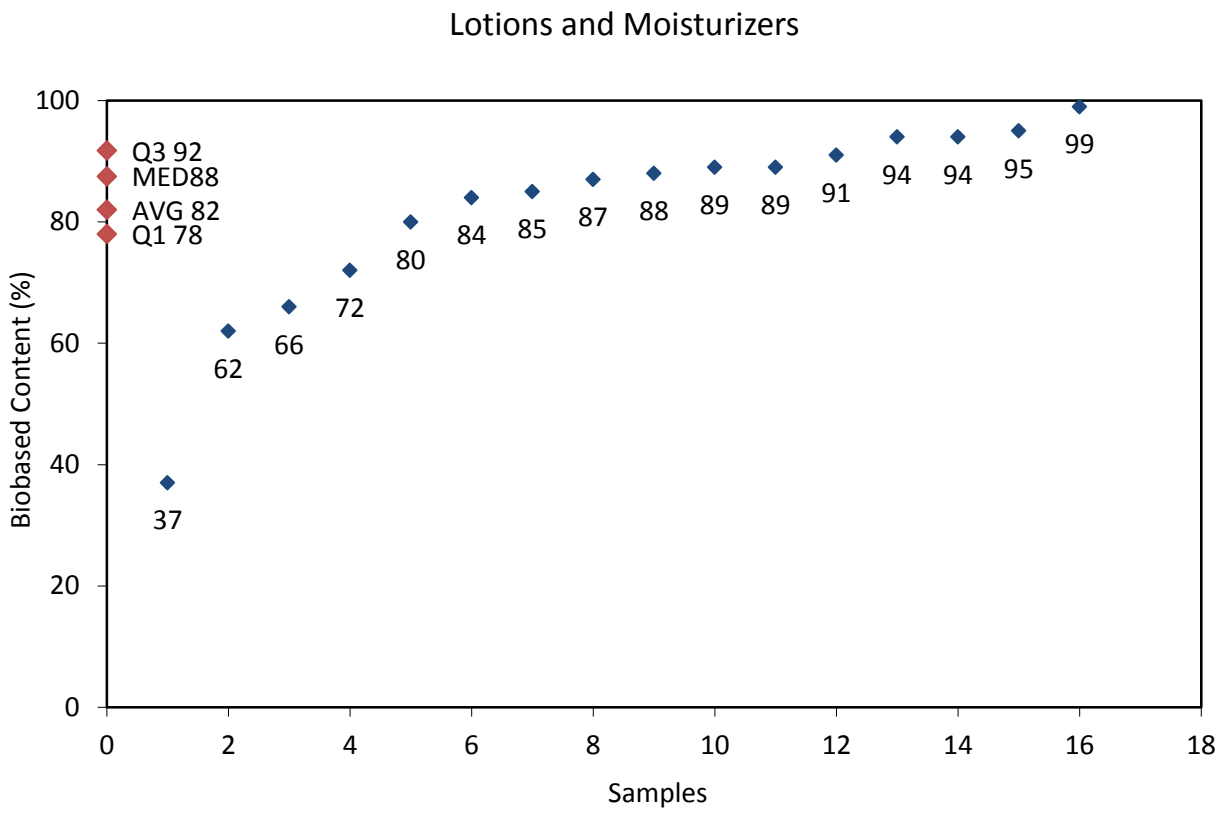
Samples Tested for Biobased Content: 16 samples of Lotions and Moisturizers have been submitted to independent laboratories for biobased content testing as specified by ASTM standard D6866-04.

Biobased Content Data: Results from biobased content testing of Lotions and Moisturizers indicate a range of content percentages from 37% minimum to 99% maximum biobased content as defined by ASTM D 6866-04. A detailed distribution of biobased content levels is included as Appendix A.

Products Submitted for BEES Analysis: Life-cycle cost and environmental effect data for 1 Lotions and Moisturizers have been submitted to NIST for BEES analysis.

BEES Analysis: The life-cycle costs of the submitted Lotions and Moisturizers range from $180.00 minimum to $180.00 maximum. The environmental scores range from 0.1247 minimum to 0.1247 maximum. A detailed summary of the BEES results is included as Appendix B.

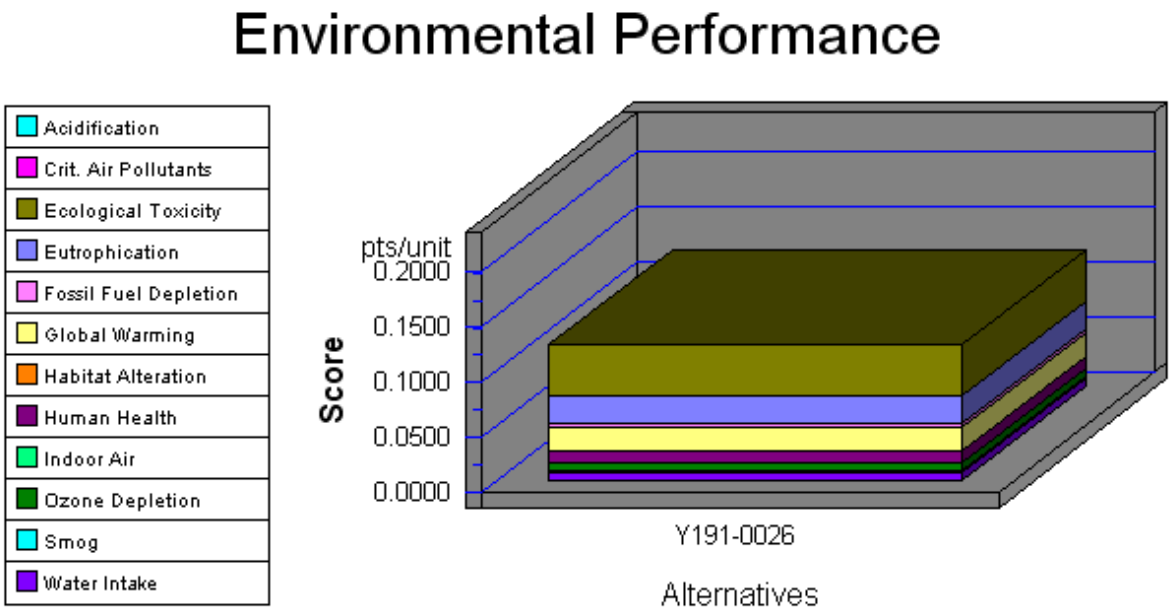
Appendix A - Biobased Content Data



	Companies Identified	Products Identified	C14	BEES
1	J8AQ	J8AQ-0095	37	
2	XB9O	XB9O-0017	62	
3	VD7X	VD7X-0079	66	
4	VD7X	VD7X-0100	72	
5	GO1A	GO1A-0011	80	
6	J8AQ	J8AQ-0089	84	
7	Q5ON	Q5ON-0025	85	
8	J8AQ	J8AQ-0093	87	
9	J8AQ	J8AQ-0092	88	
10	VD7X	VD7X-0101	89	
11	J8AQ	J8AQ-0094	89	
12	Q5ON	Q5ON-0021	91	
13	Y191	Y191-0026	94	Yes
14	WM27	WM27-0003	94	
15	J995	J995-0003	95	
16	Y191	A21Z-0009	99	

Appendix B - BEES Analysis Results

Functional Unit: 1 kilogram



Note: Lower values are better

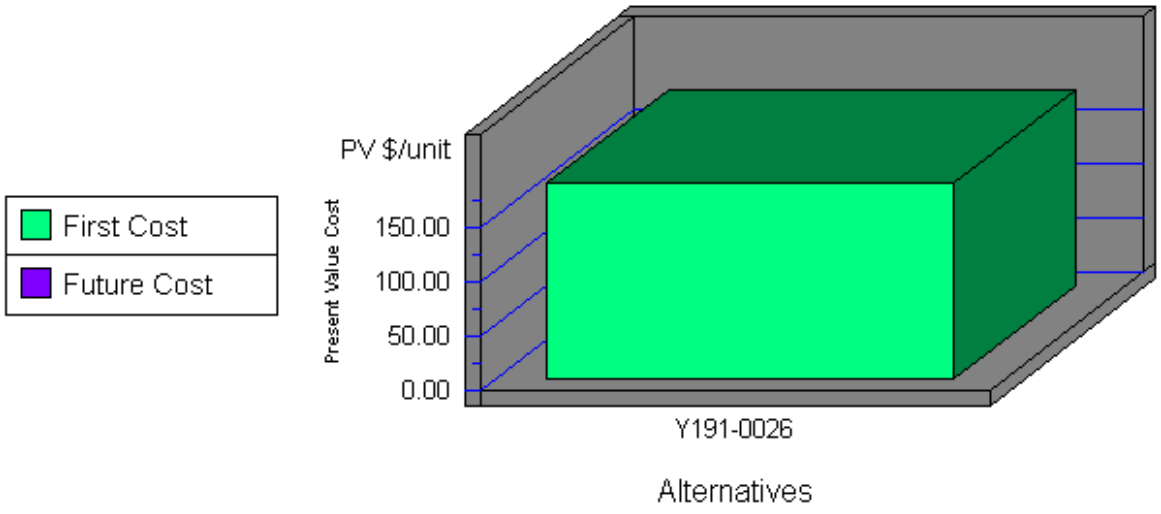
Category	Y191-0026
Acidification--3%	0.0000
Crit. Air Pollutants--9%	0.0004
Ecolog. Toxicity--7%	0.0475
Eutrophication--6%	0.0233
Fossil Fuel Depl.--10%	0.0042
Global Warming--29%	0.0210
Habitat Alteration--6%	0.0000
Human Health--13%	0.0109
Indoor Air--3%	0.0000
Ozone Depletion--2%	0.0081
Smog--4%	0.0006
Water Intake--8%	0.0087
Sum	0.1247

Lotions & Moisturizers

Impacts	Units	Y191-0026
Acidification	millimoles H^+ equivalents	2.77E+03
Criteria Air Polutants	microDALYs	8.58E-01
Ecotoxicity	g 2,4-D equivalents	5.53E+02
Eutrophication	g N equivalents	7.45E+01
Fossil Fuel Depletion	MJ surplus energy	1.47E+01
Global Warming	g CO_2 equivalents	1.86E+04
Habitat Alteration	T&E count	0.00E+00
Human Health--Cancer	g C_6H_6 equivalents	6.99E+00
Human Health--NonCancer	g C_7H_8 equivalents	5.65E+03
Indoor Air Quality	g TVOCs	0.00E+00
Ozone Depletion	g CFC-11 equivalents	1.38E+00
Smog	g NO_x equivalents	2.09E+01
Water Intake	liters of water	5.78E+02
Functional Unit	----------	1 kg of product

1 Following are more complete descriptions of units: Acidification: millimoles of hydrogen ion equivalents; Criteria Air Pollutants: micro Disability-Adjusted Life Years; Ecological Toxicity: grams of 2,4-dichlorophenoxy-acetic acid equivalents; Eutrophication: grams of nitrogen equivalents; Fossil Fuel Depletion: megajoules of surplus energy; Global Warming: grams of carbon dioxide equivalents; Habitat Alteration: threatened and endangered species count;Human Health-Cancer: grams of benzene equivalents; Human Health-NonCancer: grams of toluene equivalents; Indoor Air Quality: grams of Total Volatile Organic Compounds; Ozone Depletion: grams of chloroflourocarbon-11 equivalents; Smog: grams of nitrogen oxide equivalents; and Water Intake: liters of water.

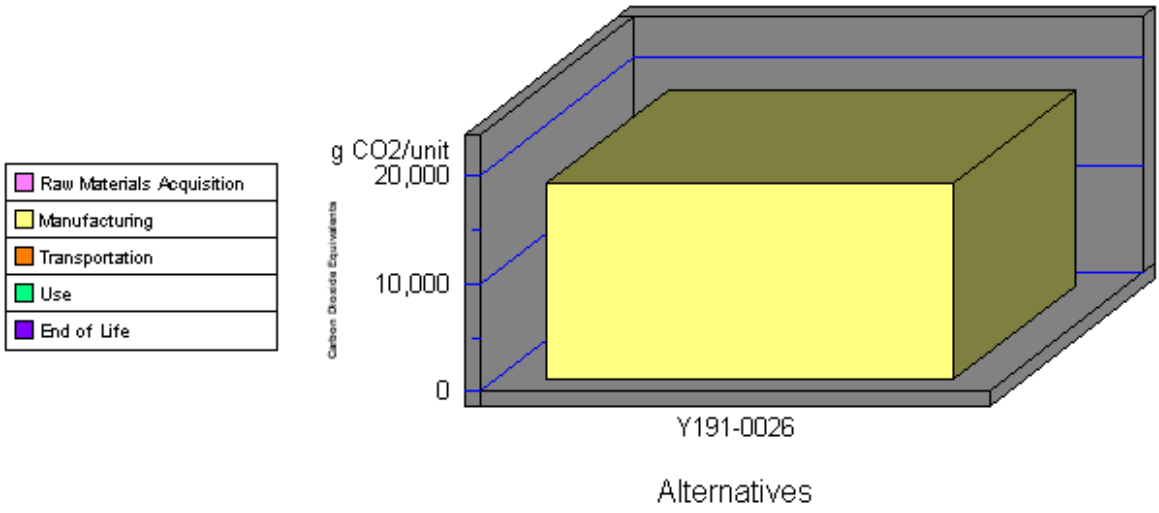
Economic Performance



Category	Y191-0026
First Cost	180.00
Future Cost-- 3.0%	0.00
Sum	180.00

*This is a consumable product. Therefore, future costs are not calculated.

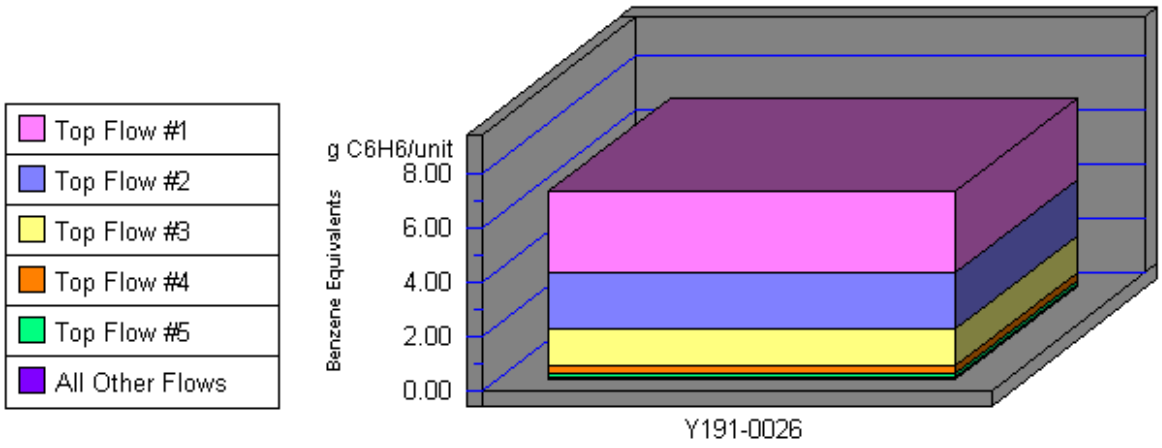
Global Warming by Life-Cycle Stage



Note: Lower values are better

Category	Y191-0026
1. Raw Materials	0
2. Manufacturing	18294
3. Transportation	0
4. Use	39
5. End of Life	0
Sum	18333

Human Health Cancer by Sorted Flows*

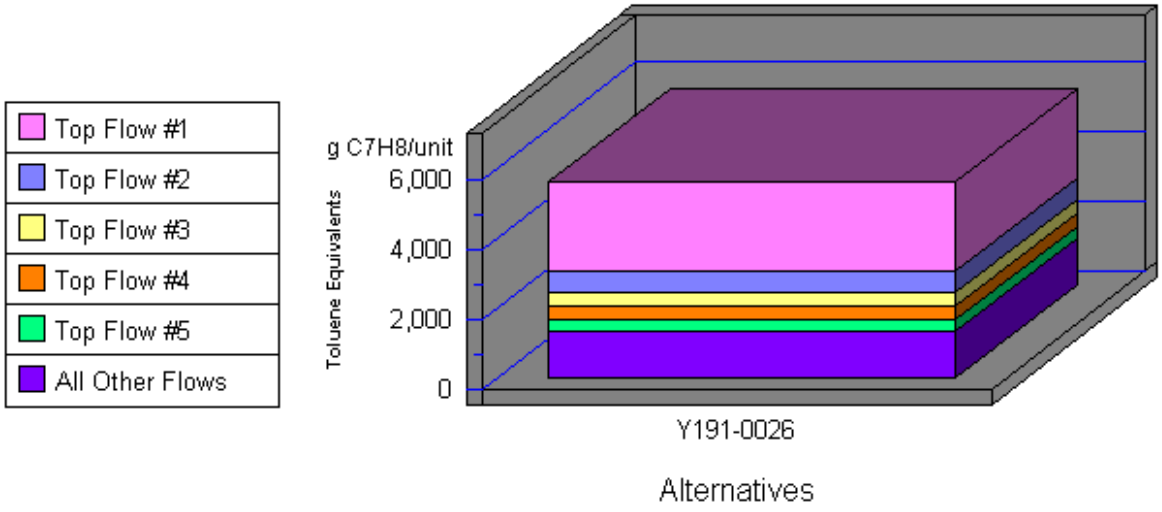


Note: Lower values are better

Category	Y191-0026
Cancer--(w) Arsenic (As3+, As5+	3.05
Cancer--(a) Dioxins (unspecifie	2.05
Cancer--(w) Phenol (C6H5OH)	1.32
Cancer--(a) Arsenic (As)	0.29
Cancer--(a) Benzene (C6H6)	0.14
All Others	0.14
Sum	6.99

*Sorted by five topmost flows for worst-scoring product

Human Health Noncancer by Sorted Flows*



Note: Lower values are better

Category	Y191-0026
Noncancer--(a) Dioxins (unspeci	2,585.73
Noncancer--(w) Mercury (Hg+, Hg	610.83
Noncancer--(w) Lead (Pb++, Pb4+	397.31
Noncancer--(w) Barium (Ba++)	372.12
Noncancer--(a) Mercury (Hg)	348.31
All Others	1,331.67
Sum	5,645.97

*Sorted by five topmost flows for worst-scoring product